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Economic Impact of the James River Park System

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Executive Summary

Large cities around the United States routinely engage researchers to examine the economic value of their Park Systems. These efforts generally assess seven core criteria including (1) property values, (2) revenue associated with tourism, (3) direct use, (4) health, (5) community cohesion, (6) clean water and (7) clean air. This study, the first of its kind for the James River Park System (JRPS) was conducted between November 2016 and March 2017. Due to the tight timeframe, we examined only a subset of these factors: property values and tourism. Nonetheless, we offer evidence of the value – to all Richmond citizens and to the City – of JRPS’ natural areas, attracting more visitors than any other Metro Richmond destinations (<http://t.co/MwFoEQdJFq>)

The James River Park System, “a Little Bit of Wilderness in the Heart of the City,” is a unique part of Richmond’s Department of Parks, Recreation and Community Facilities. With 550 acres of shoreline and islands in the capital of the Commonwealth of Virginia, the JRPS extends in 14 sections from the Huguenot Bridge (West) to a half mile beyond the I-95 Bridge (East). It includes most of the fall line of the James River, and features rocks, rapids, meadows, and forests that make for an area of unspoiled natural beauty.

As we shall see,

- The JRPS has a positive impact on residential property values, across residential property type. In particular, **single family properties in the City of Richmond see a \$6.79 increase in total assessed property value for every foot they are closer to Park boundaries (or \$8,963 per quarter-mile).**
- Based on validated visitation counts and accepted Virginia-based visitor spending quotients (per Magnini & Uysal, 2016), **the James River Park System has potential to generate \$33,582,801 per year in tourism.**
- Given JRPS’ FY17 budget of \$557,337, **every JRPS budget dollar is associated with \$60.26 visitor spending.**
- Finally, in-person interviews conducted with a targeted, but limited, sample of Park-related businesses (N=32) found that their **aggregated annual revenue exceeded \$15,850,000.** Moreover, **these businessmen and businesswomen estimated a 32.7% loss of revenue if the James River Park System did not exist.** This represents a potential loss of \$5,182,950 in revenue from these 32 local businesses alone.

Before we begin, we wish to acknowledge and express our gratitude to the 32 local businessmen and businesswomen who kindly participated in our interviews. In so doing, they provided us with invaluable information and placed their trust in our process. We are equally grateful to the nine Citizen Scientists who conducted our interviews. Research is only as good as the data – and these Citizen Scientists obtained the high-quality interview data in service of their Park system. Thank you.

Part I: JRPS Impact on Residential Property Values

1. Residential Properties

A total of 59,786 residential properties were obtained from the City of Richmond's online GIS web site at www.richmondgov.com/GIS. Among them, there are 50,779 single families, 2,778 duplexes, and 6,229 multi-families.

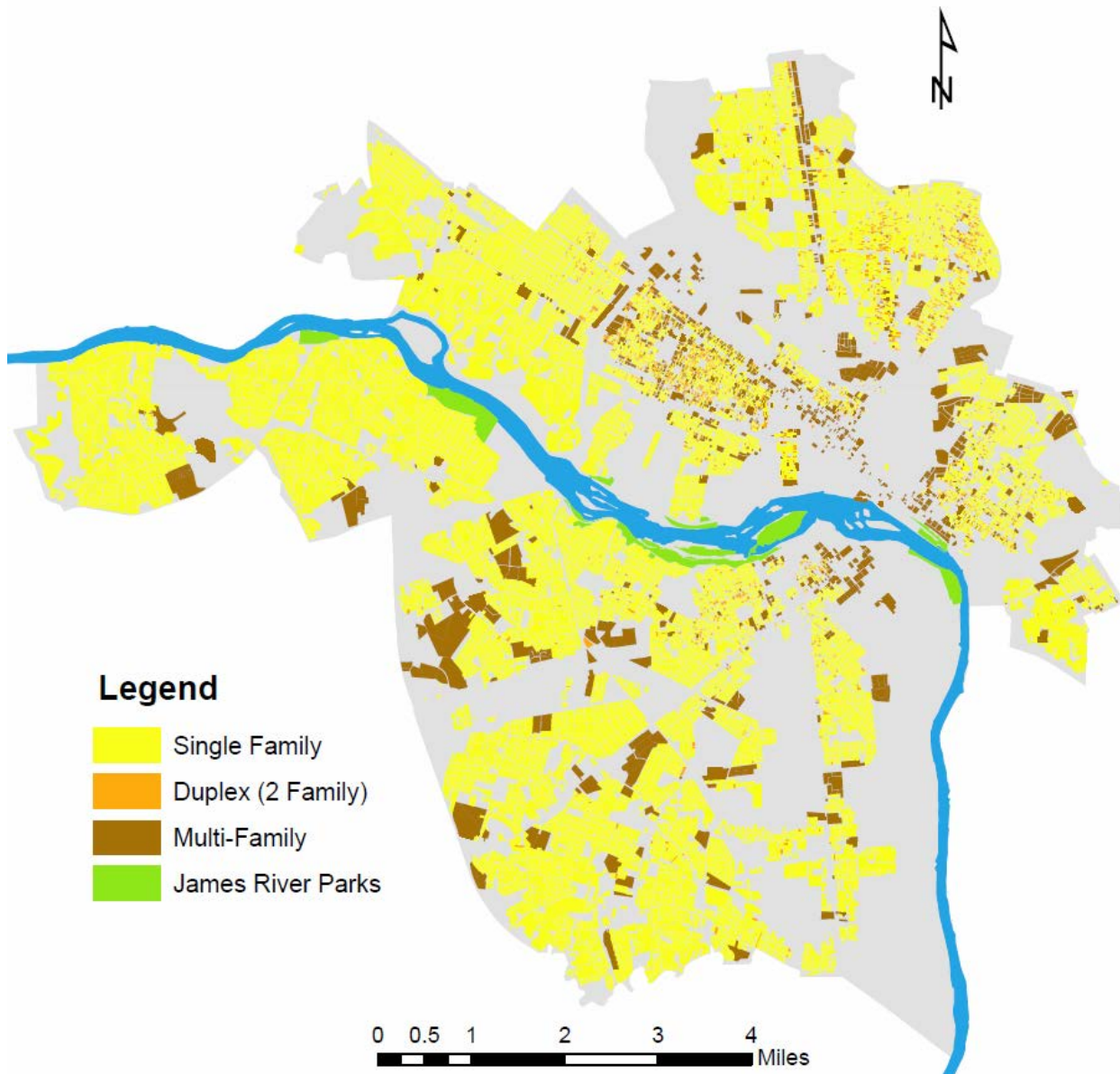
2. Methodology

We constructed three multiple regression models to assess the JRPS impact on residential property values: one for single families, one for duplexes, and one for multi-families. The dependent variable (DV) is the distance between a residential parcel's centroid to the nearest JRPS boundary while the independent variable (IV) is the total assessed property value of 2016.

3. Findings

Overall, JRPS has a positive impact on residential property values, i.e., property values tend to increase for properties that are closer to JRPS than the ones that are farther away. In specific, JRPS increases a single family property's value by \$6.79 per foot. In other words, for a single family property in the City of Richmond, every one foot closer to the JRPS would lead to an increase of \$6.79 in its total assessed property value (or \$8,963 per quarter-mile). As to duplex properties, the amount of increase in property values is \$7.21 per foot (or \$9,517 per quarter-mile). For multi-family properties, the amount of increase in property values is \$5.80 per foot (or \$7,656 per quarter-mile).

The strength of relationship between property value and distance to JRPS varies across residential property types. As measured by the Pearson's Correlation Coefficient, the strength of relationship is .178 for single family properties, .279 for duplex properties, and .01 for multi-family properties. Considering the fact that property values are affected by many factors, these coefficients, even though they are not particularly strong, confirmed that JRPS has a positive impact on residential property values.



Part II: JRPS Visitor Spending Potential

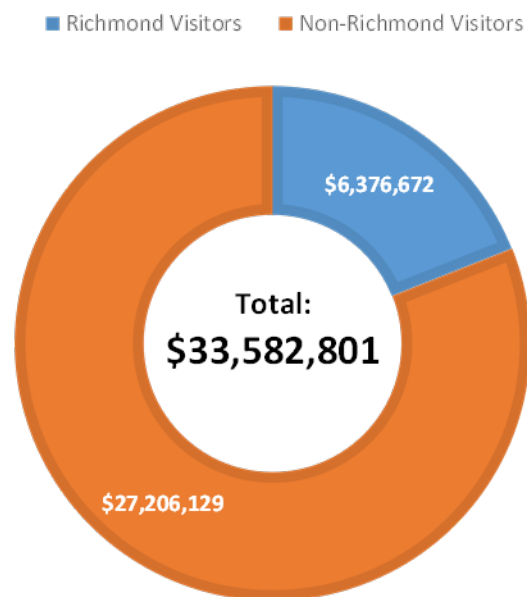
Park Visitation and Spending

According to the *Virginia State Parks – Economic Impact Report* (Magnini and Uysal, 2016), the average day-user spending is \$10.99 per local visitor and \$32.99 per non-local visitor. In a JRPS visitor survey completed in 2012, it was estimated that 41.3% of JRPS visitors are Richmond residents and 58.7% are non-Richmond residents (Shivy, 2012). JRPS recorded a total of 1,404,903 visits in 2016, from which

we estimated that Richmond residents made 580,225 visits to JRPS while non-Richmond residents made 824,678 visits. Based on the visitor spending and visitation data, we further estimated the total spending potential of JRPS visitors shown in the following table and chart.

	Total	Richmond	Non-Richmond
2016 JRPS Visitors	1,404,903	580,225	824,678
Average Day-User Spending per Visitor	n/a	\$10.99	\$32.99
Total Day-User Spending Potential	\$33,582,801	\$6,376,672	\$27,206,129

Annual JRPS Visitor Spending Potential



JRPS visitors have the potential to spend \$33,582,801 annually and the surveyed businesses only captured \$5,182,950, about 15.4% of the total visitor spending. This leads to \$28,399,851 (or 84.6% of total visitor spending) that are either captured by local businesses not included in the survey or businesses outside of Richmond. Nevertheless, JRPS is a great asset and it makes a significant contribution to the economy locally and beyond.

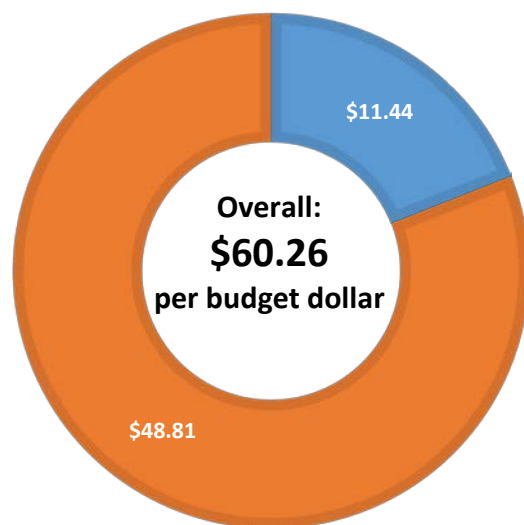
Part III: Comparison of JRPS Visitor Spending and JRPS Budget

For the 2017 Fiscal Year, the City approved \$557,337 as the overall budget for JRPS. Compared to the estimated JRPS visitor spending potential of \$33,582,801 a year, every JRPS budget dollar is associated with an average of \$60.26 JRPS visitor spending shown in the table and chart on the next page.

	Total JRPS Visitors	Richmond JRPS Visitors	Non-Richmond JRPS Visitors
Total Day-User Spending Potential	\$33,582,801	\$6,376,672	\$27,206,129
FY17 JRPS Budget	\$557,337	\$557,337	\$557,337
Visitor Spending per Budget Dollar	\$60.26	\$11.44	\$48.81

Average JRPS Visitor Spending per JRPS Budget Dollar

■ Richmond Visitors ■ Non-Richmond Visitors



Part IV: Interviews with JRPS-Related Businesses

Overview

In November and December 2016 we consulted with leaders from the James River Park System and the Friend of James River Park to create a survey that was focused on businesses with direct relevance to the Park System.



Methodology

After survey items were developed, Institutional Research Board (IRB) approval was received (VCU IRB# HM200009364) and citizen scientists attended a brief training on January 27, 2017 regarding research-related ethics. The training reviewed the importance of protecting survey respondents' privacy, preventing coercion and representing a VCU-sponsored research effort to members of the Richmond community.

Citizen scientists then fielded the survey instrument through early March 2017. Approximately 50 local businesses were targeted on the basis of having presumed ties to the James River Park System, on the basis of (1) market sector, and (2) proximity to the Park system. Interviewers quickly learned that corporate entities (e.g., Starbucks, 7-Eleven, Dunkin' Donuts and major sporting goods vendors) refused participation per company policy, which dropped the targeted businesses to 41. Upon closure, 32 survey responses were obtained, for a 78% response rates. Most business surveys were complete, although the reported number of observations varies if responses to questions were omitted.

Participants

These local businesses reported being in existence from one to seventy years (*Mean* = 15.0 years, *SD* = 14.2), with two companies owning their space, 29 leasing (and four indicating a wish to purchase). On average these businesses occupied an area of approximately 3938 square feet, with a range was 1000 – 11,000. For this analysis two outliers, with square footage in excess of 24,000 square feet, were eliminated from analysis. Businesses surveyed employed, on average, two full-time and two part-time workers with a range of one to four full-time and one to four part-time employees. Hence, the total number of individuals employed by these 32 businesses were **66 full-time workers and 72 part-time workers**.

Results

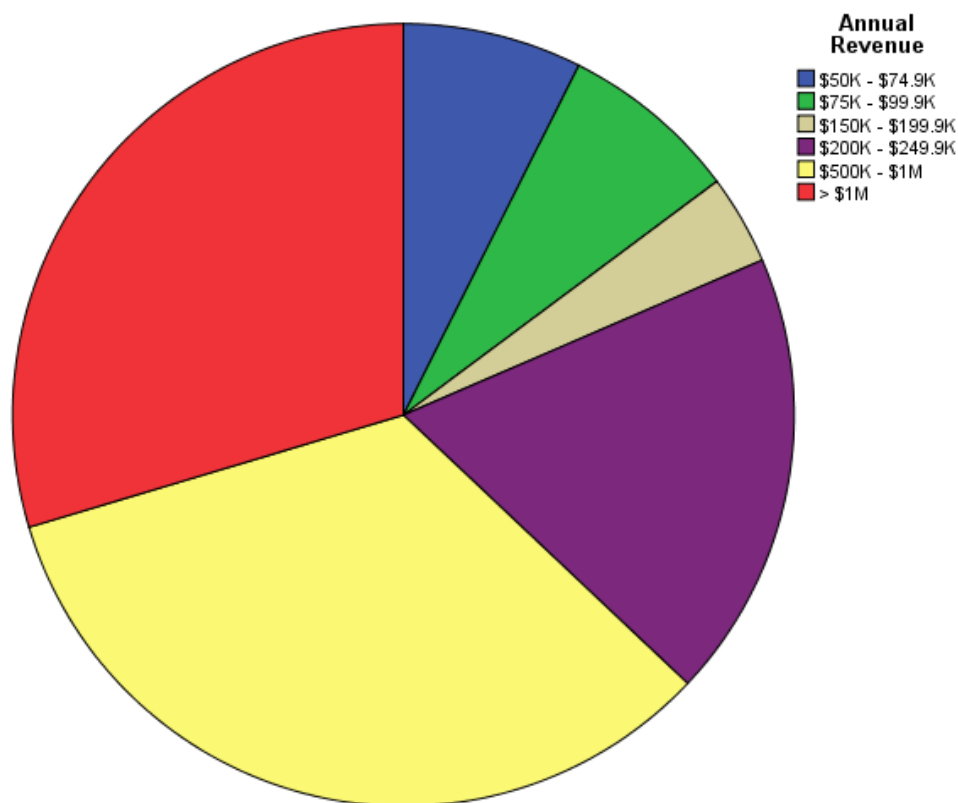
The table, below, presents a summary of the data collected. Businesses were sorted into categories included Adventure / Outdoor Recreation and Fitness Providers (8 vendors), Restaurant, Food and Drink purveyors (7), Bicycle Sales (6), Outdoor Clothing and Gear Sales (6), and Other (5). The Other category was created to protect the identity of respondents when limited category data were collected.

Business Type	Number	Percent
Adventure / Outdoor Recreation and Fitness	8	25.0
Restaurant, Food and Drink	7	21.9
Bicycle Sales	6	18.8
Outdoor Clothing and Gear	6	18.8
Other	5	15.6
Total	32	100.0

A. Revenue from Targeted Businesses

In order to motivate responses and provide some level of privacy to business respondents, we collected annual revenue information (for calendar year 2016) using range estimates, instead of exact

dollar amounts. Twenty-seven of the 32 businesses provided data (84.4%). With regard to annual revenue, the average business in our survey grossed between \$200,000 and \$499,999 per year. The median value was in the \$500,000- \$1 million dollar range. The figure, below, presents these data graphically.



Converting annual revenue data (reported as ranges) to a point estimate suggests that **the average aggregated revenue of these businesses exceeds \$15,850,000**. Perhaps the most telling information we received from responding businesses was seen from their responses to the following question: “By what percentage would your revenue be reduced if there were no James River Park System?” Of the 32 businesses surveyed, 23 (71.9%) were able to estimate a percentage by which their revenue would be reduced. On average, this estimate was 32.7% (range 0-100%). **Hence, loss of the James River Park System would result in the loss of \$5,182,950 in revenue from these 32 local businesses.**

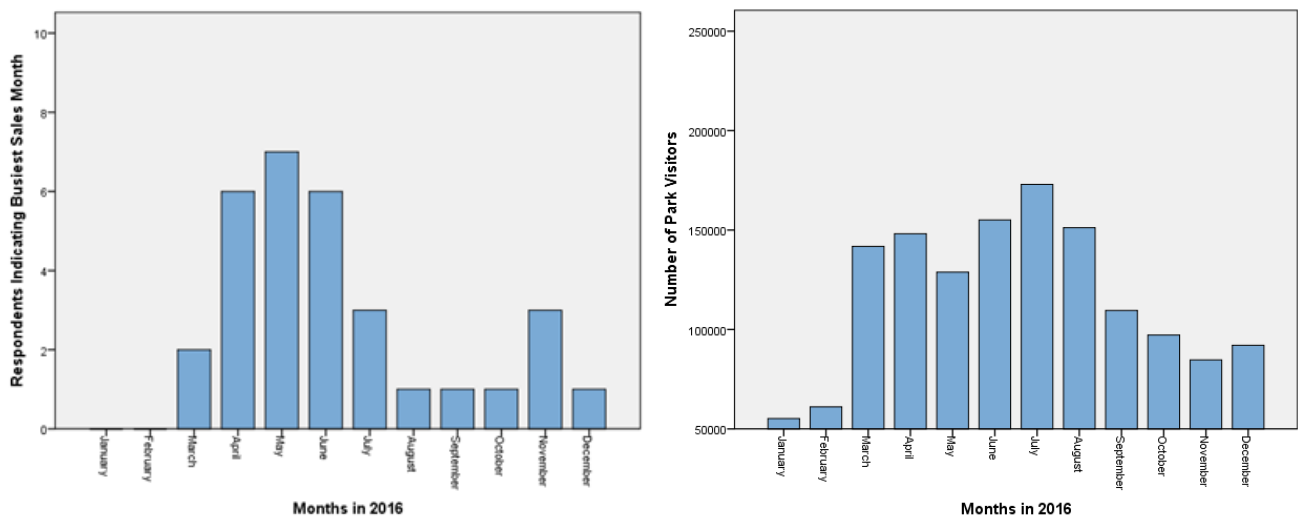
B. Employee Wages of Targeted Businesses

Converting employee wage data (reported as ranges) to a point estimate suggests that **on average these businesses expended at least \$5,912,000 in employee wages during the 2016 calendar year**. The median for

these businesses were wages paid in the range of \$100,000 to \$149,999. Again, the total number of individuals employed by these 32 businesses were 66 full-time workers and 72 part-time workers.

C. A Comparison of Busy Months for the JRPS and for JRPS-Related Businesses

We compared James River Park System visitor information 2016 (with 1,404,903 total visits) on a monthly basis with interview respondents' reports of the busiest months of the year. The bar graphs, below, show monthly JRPS visitation (on the left) in comparison to businesses' busiest months (on the right). In both cases, January and February tend to be the 'slowest months' whereas April, May, and June overlap as the busiest months of the year for the JRPS and for JRPS-related businesses. Both the JRPS and JRPS-related businesses see a significant fall-off 'customers' each September.



Part V: Festivals and Events in the James River Park System

The following list of festivals and other events take place, at least in part, within the bounds of the James River Park System. These City celebrations make Richmond a fun and lively place to recreate and reside. They also pump hundreds of millions of dollars into the City's economy. JRPS serves as an invaluable partner, or beautiful backdrop, for these events.

- Dominion River Rock
- Richmond Folk Festival
- Sports Backers, Trails and Ales
- James River Splash and Dash
- RVA MORE, Tour De Fall Line
- Shiver in the River
- Juneteenth Celebration

Part VI: Future Directions

This report represents but a limited, first step, in assessing the full economic impact of the James River Park System to the City of Richmond, VA. Using available data, we investigated the Park System's impact on (a) residential property values, (b) visitor spending potential, (c) business revenue, and (d) employee wages. We also compared JRPS visitor spending potential to the Park System's City-approved budget, and we explored what the loss of the JRPS would mean to 32 targeted (park-related) businesses. A future, more comprehensive study could:

- Expand the survey to include more businesses to better gauge the JRPS-dependent revenues.
- Conduct an in-depth economic impact study of JRPS related to local economy especially in the areas of tax revenues, employment, and health benefits.
- Assess the carrying capacity of JRPS and identify potential activities to further promote the use of JRPS.

References

City of Richmond Online GIS website ([http:// www.richmondgov.com/GIS](http://www.richmondgov.com/GIS)).

Magnini, V. P., & Uysal, M. (2016). *Virginia State Parks – Economic Impact Report*. Virginia Polytechnic and State University.

Springston, R. (2015, February 7). New research shows James River Park is region's most-visited site. *Richmond Times-Dispatch*. Retrieved from (<http://t.co/MwFoEQdJFq>).

Qualitative Responses to survey item #17

“How does the existence of the James River Park System complement your business?”

Brings significant exposure to residents with interest in _____ (sport) of the James River
Not sure we've been able to track it.
As outdoor advocates we love the park system. As an owner and _____ it is my favorite thing this city has to offer. Without park access I would have left Richmond years ago.
Paths and trails, serve our customer base needs
We have a large consumer base of _____ (activity) who visit JRPS as often as daily.
_____ (activity) are frequent visitors to the business we also _____ (activity).
It is the focal point and the inspiration. Without RVA's attachment to the JRPS, _____ wouldn't exist.
Yes. Outdoor enthusiasts, (activities, sports) folk.
Summer months increased business
Allows organization to (activity) in park system and organize events
(Activity) brings in many folks looking to purchase.
Very complimentary, many park visitors purchase items in the store.
Very little. Not a specific server (activity).
The park system provides an excellent environment for our active customer base.
We benefit a great deal from all the traffic to and from (park area). (Location) brings us a tremendous amount of business.
(Activity) trails.
We pay to use (location for activity). Our members love this because of its (location), scenic views, and the versatility the land provides for (activity).
(Activities) tie in with park activities -- consider park a large driver of business.
JRPS is one of the main contributing factors for us being in RVA. The existence of the JRPS causes a need for its users to visit our store.
Could NOT exist without it.
The community of people who love and respect all aspects of the James River is a growing one. Being a part of that community, for 20 years now, my business gains respectably, hence I get (business).
Without it, its employees, its NGO support groups and the improvements in the park over the years, it would be hard to imagine us doing business.
We (activities) in the park on a daily basis in the summer. It is huge for us.
We encourage people to live actively. And, parks are a great place to do this.
Incredible help on weekend. Park visitors stop in after visit.
Access to Pony pasture runs right next to our (location).
Lot of visitors from the park.
Incredible asset. People (who visit the business) like to be outdoors
It draws our customers to this neighborhood to live.
Hugely beneficial.
Allows me to operate (my business). Could not happen without.
(Location).